

We have Zebra Mussels in Song Lake

In spite of all of our best efforts to keep them out, zebra mussels are here. They are an invasive species capable of inflicting severe ecological and human harms. With their rapid reproduction and little predation from other species, zebra mussels can now overwhelm our lake.

There is currently no way to eradicate or even control zebra mussels once they have infested a lake. We must learn to live with them.



A zebra mussel found in Song Lake. This is an invasive species.

Protective water shoes will be needed.

One caution now is to be aware of the sharp edges that result from shell breakage. When masses of zebra mussel collect, they make walking on the shore or shallow areas dangerous. This precaution may also be true for pets, but is certainly true for children. Cuts have been reported deep enough to require medical attention.

Don't spread them to other lakes!

Although a boater did not use the protocols to keep them out of our lake, we need to be responsible and prevent the spread to others. If you move your boat off of Song Lake to another waterbody that is not infested, be sure to **CLEAN, DRAIN and DRY** the boat before launching on a pristine lake.

Save our native mussels.

Working with SUNY- ESF, we will try to salvage some of our pearly mussels. They will not be able to return to Song Lake as long as the zebra mussels are here, but we will find them a new home.



Pearly mussels found in Song Lake. These are the native species that are now threatened by the zebra mussels.

Ecological Harms

Because they eat the tiny algae and plankton, they make the water clearer. Water clarity will allow more sunlight to enter the lake creating opportunities for aquatic plants to thrive. One zebra mussel can filter about one quart (liter) of water per day, and large colonies filter vast amounts of water, removing important food resources at the same time. Unfortunately, they do not eat cyanobacteria, or toxic producing algae. In fact, Harmful Algal Blooms tend to increase in zebra mussel infested waters.

The impact on the fish populations may be slight or severe. In some cases, food depletion causes fish populations to decline. Fish kills can also occur with large colonies of zebra mussels that deplete dissolved oxygen in the water.

Our native pearly mussels are severely threatened. As many as 10,000 zebra mussels have been found attached to a single native mussel! In Song Lake, we have the lovely Eastern Elliptio, shown here, which over a short period of time can be exterminated by zebra mussel.



Zebra mussels suffocating a lake mussel – D. Molloy

Infrastructure and Recreational Damage

Zebra mussels are notorious for attaching to water intake pipes and reducing or completely blocking the flow of water to power plants, public water supply plants, and industrial facilities. Zebra mussels also

colonize on boat hulls and motors (including water intake pipes and pumps), resulting in inconvenience and in some cases, the need for expensive repairs.

Zebra mussels reproduce at a staggering rate. Each female zebra mussel can lay as many as a million eggs each summer. The young (veligers) then travel with water currents, until they develop an appendage called a "foot" for moving over surfaces and adhering to them. Ultimately, zebra mussels settle on a stable surface where they live, grow, and reproduce. Zebra mussels generate a tuft of fibers, known as byssal threads, from a gland in their foot. These fibers produce an adhesive secretion that allows them to attach firmly to all sorts of underwater surfaces.



Zebra mussels on boat prop - Pyramid Lake

Zebra mussels also are sharp and can cut bare feet, and dead mussels are very smelly, both of which diminish the enjoyment of zebra mussel-infested beaches, swimming areas and lakefront property.

The ecological damage that can occur also impacts fishing as the fish will have less food and may even die off with reduced oxygen levels.

How Did They Get into Song Lake?

Zebra mussel introduction occurs almost exclusively from the human transport of either mature mussels or veligers. It is not possible to know for certain how they arrived on Song, but transport most likely occurred on a boat (or boats) coming from an infested lake (s). There are many infested lakes nearby, including Little York Lake and Otisco. Mature mussels hitch on the boat hulls or plant debris that was tangled in props or other gear. Veligers by the thousands can be easily transported in bilge water, livewells and bait buckets.



Zebra mussel infestation on a Finger Lake shoreline.

What Can We Do Now?

We can be angry, anxious and frustrated, but right now, there is no way to eliminate or even control zebra mussels in infested lakes. Homeowners can take care of their boats and equipment, protect their feet and those of their pets, but there is currently no chemical or biological control for the widespread infestation such as the one in Song Lake.



Please remember, zebra mussels are not the only damaging invasive species. Currently, Song Lake is relatively free of invasive. As Dr. Schulz shared with us, there are a lot of other harmful invasive species we don't have, like quagga mussels, which could cover even more of the lake bottom, and pond weeds like starry stonewort, and two kinds of milfoil. It's still really important that the residents continue to **clean, drain and dry** before letting boats on the lake so the situation does not get worse.



Sign on Texanoma Lake beach.

Other lakes that have infestations report the first five years as the "boom" followed by either a "bust" or a tapering off. While we do not know exactly what the impact will be in Song Lake, we can anticipate the next few years may be difficult. The Watershed Committee has had several productive discussions with the DEC and other professionals, including Dan Molloy, creator of Zequinox. When there is a solution to our lake wide infestation, we will be the first for consideration. If you would like to know more about these discussions, please contact Tarki.